E-Commerce in Ethical Sales Promotion: Future Aid for Indian Drug Industry

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Abstract: Legally, ethical drug promotion in India is confidential and done in private with the registered medical practitioners. Pharmaceutical is a profit generating industry to which doctors are the key business drivers because medicines are sold on prescriptions. The industry has undergone many changes during the last two decades. With increasing competition in the generic drug market among numerous brands, the conventional marketing models are becoming obsolete and the industry needs ingenious ideas. The introduction of e-commerce has changed the way of doing business in India. This open prospective study was carried out with randomly selected 361 doctors from 8 specialties across 23 centers in India to evaluate whether e-commerce, with its pioneering technologies, could change the face of ethical drug promotion, particularly, the modality of communication. The results showed that there was an immediate need for developing e-commerce platforms for more than 72,000 doctors who are currently left out of the industry's marketing network and there is a situational demand for expansion of electronic communication media for country's more than 700,000 doctors. The study also evaluated prospers of e-commerce modules in ethical drug promotion for nearly one million doctors and for advertising and promoting more than 100,000 medicinal brands in India. However, e-commerce application in ethical drug promotion should be felicitous and should be implemented with caution. Otherwise, it may turn out to be ineffective and even counter-productive.

1. Introduction

India is a growing economy; set to grow at 7.0 percent in 2019; picking up to 7.2 percent in 2020, reports the World Economic Outlook. The closest competitor in terms of growth in GDP is China with a projection of 6.2 per cent in 2019 and 6 per cent in 2020 [1]. Indian pharmaceutical market (IPM) is in tandem with country's growing economy which suggests the pharmaceutical industry of India (PII) to foster its growth. However, growing at par with the market or faster than that actually depends upon marketing and sales activities which are considered to be the most potential of all infrastructure elements.

Marketing is actually developing a demand for a product and fulfilling the customer's needs whereas selling concerns itself with the tricks and techniques of getting people to exchange their cash for the product [2]. Therefore, sales refers to the short term need based on what it takes to 'close the deal' but marketing is a longer term concept which strategize the understanding of customer needs, influence customer perceptions and identify how a company can capitalize on that [3]. While thinking about the business in terms of customers' needs and their satisfaction, in today's scenario, rational usage of technology has a key competitive advantage in delivering quality customer service.

Pharmaceutical business is more of marketing than selling and, in India; pharmaceutical marketing is known as ethical drug promotion which has witnessed sea change over the years. Today's world is controlled by technology and now PII requires reorienting its conventional model of communication with the doctors who are actually the industry's key business partners. The

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technology, as referred to here, is the electronic devices that store the data or to the communication methods that transmit the data; including email, text and instant messaging [4]. Business communication through electronic media, hereinafter called as e-commerce, can be very beneficial if used rationally. It is advisable to find a method of using e-commerce effectively by finding the right tool which has a clear message to pass on and fits the business goals best [5]. Unfortunately, pharmaceutical e-commerce in India, for Business to Consumer (B to C), is mostly confined to the online pharmacies and, so far, most of the discussions are hovering around the ebb and flow of selling online medicines [6, 7, 8]. However, the demands for medicines are generated through doctors' prescription which is the resultant of rigorous marketing activities. Until now, the significance of e-commerce in India's ethical drug promotion is incompletely defined. The objective of this paper is to understand the scope for e-commerce in the ambit of ethical drug promotion in India.

The author of this paper has been engaged in pharmaceutical sales and marketing for the last 32 years. The numerical data shared here is based on a multicentric market survey by the author's own research team.

2. Context

In this section, we will briefly outline the frame of reference of our study.

2.1 Indian Pharmaceutical Market

IPM has reached to US$18.2 billion in 2018 from US$17.87 billion in 2017 registering a growth of 9.4 per cent year-on-year in rupee value [9]. Spending on medicines in India is projected to grow by 9-12 per cent over next five years to make the country as one of the top ten countries in terms of medicine spending. Due to retrospective growth and future market potential, in 2017 alone, Indian pharmaceutical sector witnessed 46 merger & acquisition (M&A) deals worth US$ 1.47 billion. According to the data released by the Department of Industrial Policy and Promotion (DIPP), government of India; country's pharmaceutical sector attracted a cumulative inflow worth US$15.98 billion between April 2000 and March 2019.

Despite being very lucrative, IPM is highly fragmented with about 24,000 players out of which 330 are in the organized sector [10]. Branded generics dominate which constitutes nearly 70 per cent of the overall market while patented drugs and over the counter (OTC) medicines enjoy 9 per cent and 21 per cent respectively.

IPM comprises of thousands of pharmaceutical brands derived from the generics which are actually called as 'branded generics'. During February 2017, IPM had 3065 generic drugs and 110,046 branded generics [11]. The imposition of ban on certain fixed-dose combination drugs and demonetization of high-value currency notes in 2016 temporarily affected 6000 branded generics produced by 100 plus drug manufacturing companies [12]. But, the industry soon recovered and got into further fierce competition.

2.2 Ethical Drug Promotion in India

Pharmaceutical drug promotion in India is performed confidentially. Although competition necessitates brand promotion; the pharmaceutical products in India cannot be advertised openly either through print or electronic media because of the restrictive laws of the land. India has two exclusive legislations to govern ethical drug promotion activities– (i) the Drugs and Cosmetics Act, 1940 and (ii) the Drugs and Magic Remedies (Objectionable Advertisements) Act, 1954. Section 5 of the Drugs and Magic Remedies (Objectionable Advertisement) Rules, 1955 states: *All documents containing advertisements relating to drugs….shall bear at the top, printed in indelible ink in a conspicuous manner the words "for the use of a registered medical practitioner or a hospital or a laboratory*. This, in fact, makes the drug promotion confidential in India unlike many countries.

Conventionally, pharmaceutical sales representatives (PSRs) are engaged at the forefront in implementing the strategies of ethical drug promotion. PSRs in India, *by whatever name called*, are legally termed as sales promotion employees (SPEs) by the Sales Promotion Employees

(Conditions of Service) Act, 1976; who perform ethical drug promotion among the registered medical practitioners in private. Besides continuing medical education (CMEs), text books and medical journals; Indian doctors like meeting the SPEs for drugs and health related information.

3. Aim of the Study

The aim of our study was to explore the scope of employing e-commerce in India's ethical drug promotion and its utility in improving service to the customers and satisfying their needs.

4. Materials and Methods

361 doctors were met across 23 centers in India covering Tire-1, Tire-2 and Tire-3 cities. After informing about the study consent was obtained. All 361 doctors (M=266, F=95, mean age 51 years, range 36 to 65 years) were randomly selected from different specialties viz. General Practitioners (GPs), Physicians (Phy), Obstetricians & Gynaecologists (O&G), Orthopedic Surgeons (Orth), General Surgeons (Surg), Paediatricians (Paed), Cardiologists (Card) and Diabetologists (Diab). (*See Table-1 and Table-2)*

Table 1 Age Group And Sex Ratio of the Participant Doctors

	Number of Doctors	Age Group (years)		
		36 to 45	46 to 55	56 to 65
Male	266 (74%)	41 (11%)	154 (43%)	71 (20%)
Female	95 (26%)	8 (2%)	68 (19%)	19 (5%)

Table 2 Specialty-Wise Breakup of the Participants

	GPs	Phy	O&G	Orth	Surg	Paed	Card	Diab
Total no. of doctors	106	79	63	33	29	21	18	12
(%)	29.36	21.88	17.45	9.14	8.03	5.81	4.98	3.32

Initially, each doctor was given 24 words (*See Table 3*) and was requested to randomly pick up 16 words out of them. Based on individual liking for a particular set of words, doctors were divided in different sub-groups indicating their individual personality style: (i) Traditionalist; (ii) Interactive; (iii) Inquisitive and (iv) Trailblazer.

Table 3 Determining Personality Style

Personality style	Mostly picked up words
Traditionalist	Self-controlled, Cautious, Well ordered, Methodical, Perfectionist, Detail-oriented
Interactive	Emotional, Empathetic, Charming, Sociable, Spontaneous, Expressive
Inquisitive	Logical, Authentic, Reasonable, Analytic, Focused, Judgmental
Trailblazer	Innovative, Imaginative, Future-oriented, Visionary, State-of-art, Explorative

Deeper analysis was done to identify the individual personality style of participating doctors across specialties. (*See Table 4*)

Table 4 Specialty-Wise Predominant Personal Style among Doctors

Doctors	GPs 106	Phy 79	O&G 63	Orth 33	Surg 29	Paed 21	Card 18	Diab 12	Total 361
Traditionalist	41 (39%)	38 (48%)	29 (46%)	19 (58%)	12 (41%)	3 (14%)	11 (61%)	5 (42%)	158 (44%)
Interactive	57 (54%)	22 (28%)	23 (37%)	3 (10%)	2 (7%)	12 (57%)	2 (11%)	3 (25%)	124 (34%)
Inquisitive	6 (6%)	14 (18%)	8 (13%)	4 (12%)	9 (31%)	4 (19%)	4 (22%)	3 (25%)	52 (14%)
Trailblazer	2 (1%)	5 (6%)	3 (4%)	7 (20%)	6 (21%)	2 (10%)	1 (6%)	1 (8%)	27 (8%)

Thereafter, doctors were given questionnaire on the basis of following criteria:

i.Preference in meeting SPEs.
ii.Meeting time with SPEs – before or after patients.
iii.Preferred frequency of meeting an SPE during a month.
iv.Internet browsing for up to date medical knowledge.
v.Frequency of accessing e-mail account.
vi.Information provided by the pharmaceutical companies adds value or not.
vii.Receiving companies’ business e-mail or social media content.
viii.Liking towards tablet computers when used for medical detailing.
ix.Any concern about such electronic device.
x.Average time spent in a day for listening to the pharmaceutical companies.
xi.Appraisal for the quality of representation.

5. Study Findings and Discussions

Out of 361 participant doctors, 331 like to meet the SPEs in their clinics suggesting nearly 92 per cent of the doctors prefer in-person meetings with SPEs. They expect to know about the new drugs and newer information about already existing medicines while interacting with SPEs. The study also suggests that 21per cent doctors like to meet SPEs before seeing their patients while 69 per cent doctors meet SPEs after patients. Another important finding was doctors’ preference about frequency of meeting SPEs. Out of total 331 doctors who are willing to meet SPEs, 264 doctors expressed their willingness to meet SPEs once in a month suggesting that nearly 80 per cent (comes around 73 per cent of total doctors) do not prefer company’s representation in their clinics for more than once in a month. (*See Table 5*)

Table 5 Specialty-Wise doctors’ Preference in Meeting Spes

Doctors	GPs 106	Phy 79	O&G 63	Orth 33	Surg 29	Paed 21	Card 18	Diab 12	Total 361
Prefer in-person meeting with SPEs	97 (92%)	68 (86%)	59 (94%)	31 (94%)	28 (97%)	20 (95%)	14 (78%)	10 (84%)	331 (92%)
Prefer meeting before patients	26 (25%)	13 (16%)	14 (22%)	07 (21%)	10 (34%)	3 (14%)	3 (17%)	2 (17%)	78 (22%)
Prefer meeting after patients	73 (69%)	61 (77%)	43 (68%)	22 (67%)	17 (59%)	15 (71%)	10 (56%)	8 (67%)	249 (69%)
Prefer meeting once in a month	81 (76%)	52 (66%)	51 (81%)	21 (64%)	23 (79%)	17 (81%)	12 (67%)	07 (58%)	264 (73%)

“Reach to the customers at all cost” has become a common marketing practice among pharmaceutical companies in India. With more than one hundred and fifty thousand SPEs across the country; each having a target of meeting 10-12 doctors a day, the pharmaceutical companies target top order practitioners for “repeat visit” which means meeting twice or thrice in a month and, in some cases, weekly once. Such deployment tactics cause high turnouts in a doctor’s clinic. This study could ascertain that, now-a-days, doctors are restricting entry of SPEs in their clinics, reducing the number of calls per day and most of them denying SPEs to meet more than once in a month.

Another contribution of the present study is estimating average usage pattern of electronic media by the Indian doctors for information: on an average, 80 per cent browse internet on a regular basis to update their knowledge; nearly 45 per cent access their e-mail account more than thrice a week (considered as more frequently) and 33 per cent access e-mail is twice or less (termed as less frequently) during the same period. (*See* Figure *1*)

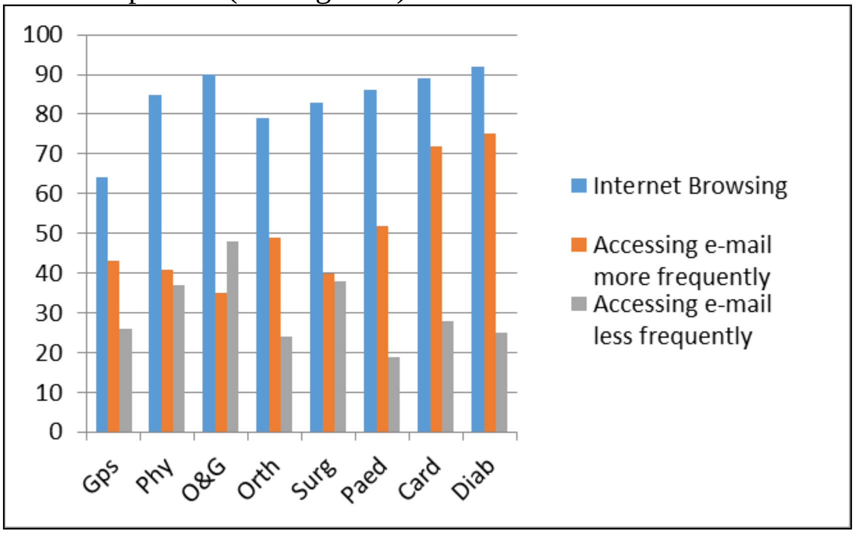

Figure 1 Using Electronic Media for Information by Indian Doctors

This study also found out the doctors' inclination in receiving electronic communication from the pharmaceutical companies through e-mail and through mobile-apps. There were three queries in this regard – (a) whether doctors like to receive promotional e-mail or mobile-app messages from pharmaceutical companies; (b) what should be frequency of such communication and (c) the type of content that doctors may prefer. This data is extremely relevant in Indian scenario where more than hundred thousand brands are present in the market and pharmaceutical companies are planning for "additional brand reminder" through electronic media to beat the intense generic competition. 71 per cent doctors were in agreement to receive e-mails from pharma-marketers whereas only 45% agreed for mobile-app. Moreover, 81 per cent doctors expressed that they would like to receive maximum 3 e-mails in a month and weekly just one mobile-app message from any company. When our research team wanted to know the reasons for doctors' acrimony towards companies' electronic communication, 73 per cent expressed their apprehensions about monotonous e-mails and 79 per cent about futile mobile-app messages which may not add any value to their need. (*See Table 6*)

Table 6 Doctors' in General Opinion on Pharmaceutical companies' Electronic Communications

Doctors	GPs 106	Phy 79	O&G 63	Orth 33	Surg 29	Paed 21	Card 18	Diab 12	Total 361
Like to receive e-mails	59 (56%)	54 (68%)	48 (76%)	26 (79%)	27 (93%)	18 (86%)	15 (83%)	8 (67%)	255 (71%)
Maximum 3 e-mails in a month	87 (82%)	66 (84%)	57 (90%)	22 (67%)	21 (72%)	18 (86%)	11 (61%)	10 (83%)	292 (81%)
Apprehensive about e-mail's quality	79 (75%)	61 (77%)	39 (62%)	23 (70%)	19 (66%)	19 (90%)	13 (72%)	11 (92%)	264 (73%)
Like to receive mobile-app messages	63 (59%)	32 (41%)	32 (51%)	08 (24%)	11 (38%)	9 (43%)	6 (33%)	3 (25%)	164 (45%)
Weekly maximum one mobile-app message	98 (92%)	71 (90%)	62 (98%)	19 (66%)	23 (79%)	18 (86%)	11 (61%)	8 (67%)	310 (86%)
Concerned about utility of mobile-app message	81 (76%)	73 (92%)	39 (62%)	29 (88%)	24 (83%)	16 (76%)	13 (72%)	11 (92%)	286 (79%)

Based on the above observations, PII should consolidate its drug promotion activities. Doctors had multiple responses towards how to prepare credible and useful information for them. However, all were directed towards satisfying need as per personality style. Here, we have already dealt with individual style. Despite wide variations from place to place, we can have a diagrammatic look at the personal style ratio of doctors who took part in this study. (*See* Figure *2*)

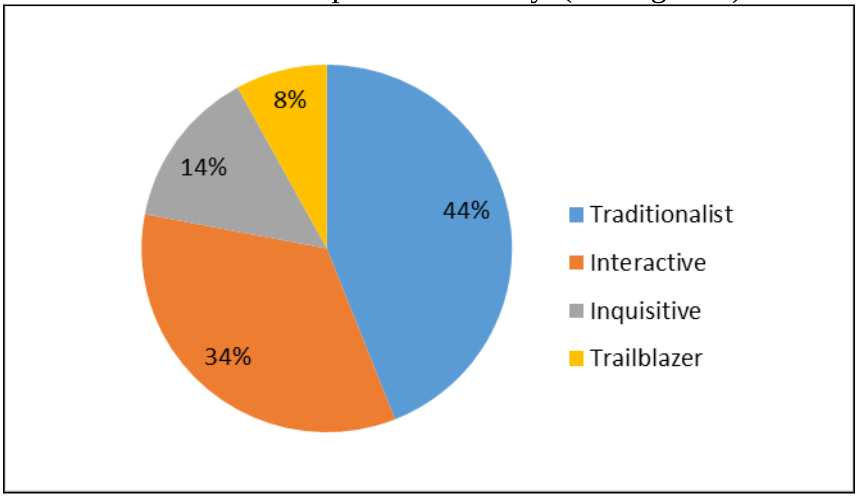

Figure 2 Personal Style Ratios of Doctors

There is nothing right or wrong in personal style. Identifying customers' need is an important parameter of marketing to satisfy their need. Our study suggests that the traditionalist doctors are usually not very expressive and are less approachable; satisfied with their ongoing practice habit; cautious about new therapies; they like specific and to the point communication; rely more on text books and do not like to be overloaded with 'latest' information. Interactive doctors are usually descriptive; love to share their emotions and thoughts; habitually price conscious and prefer to receive information pertaining to their patients' well being. Inquisitive doctors are formal and straight forward in their approach; believe only well-documented references from reputed journals and text books; analytical and focused in their approach. Trailblazer doctors are imaginative, innovative and future-oriented; prefer new drugs, latest technology and newer research; enthusiastic about any break-through rather than traditional approach. Electronic communication in drug promotion should be tailored accordingly.

Another insight from our data: nearly 88 per cent of the doctors consider electronic communications from companies either in the form of e-mail or mobile-app as intrusion into their private life unless those are asked for. This was irrespective of the content of communication. (*See Table 7*)

Table 7 Doctors Consider Unwanted Electronic Communication as Intrusion

Doctors	GPs 106	Phy 79	O&G 63	Orth 33	Surg 29	Paed 21	Card 18	Diab 12	Total 361
Consider companies' electronic communication as intrusion unless asked for	92 (87%)	74 (94%)	59 (94%)	26 (79%)	27 (93%)	17 (81%)	14 (78%)	08 (67%)	317 (88%)

While sending electronic communication to the doctors of their own, the pharmaceutical companies should be enough cautious since the doctors may view receiving e-mail or social media communication via mobile apps as intrusive into their daily life.

The effect of alteration in marketing parameters, with the introduction of tablet computers as detailing aid by few pharmaceutical companies, was also studied. Over 73 per cent doctors did not feel much difference between tablet computers and conventional visual aid when an SPE is meeting them in person. Only 19 per cent doctor found e-detailing more attractive. However, 84 per cent doctors had suspicion that pharma companies put them under surveillance through tablet computers and expressed concern over it. Nearly 86 per cent doctors informed that e-detailing done through tablet computers failed to grab extra attention. (*See Table 8*)

Table 8 e-Detailing and Tablet Computers in doctors' Eyes

Doctors	GPs 106	Phy 79	O&G 63	Orth 33	Surg 29	Pead 21	Card 18	Diab 12	Total 361
Tablet computers make no difference when SPEs are meeting in-person	87 (82%)	63 (80%)	39 (62%)	19 (58%)	21 (64%)	14 (67%)	13 (72%)	9 (75%)	265 (73%)
Prefer e-detailing over conventional visual-aid	11 (10%)	14 (18%)	18 (29%)	9 (28%)	4 (14%)	5 (24%)	4 (22%)	5 (42%)	70 (19%)
Suspect surveillance through tablet computers	89 (84%)	71 (90%)	49 (78%)	29 (88%)	26 (90%)	15 (71%)	14 (78%)	10 (83%)	303 (84%)
Computer tablets were not additional attention-catcher as detailing aid	81 (76%)	73 (92%)	62 (98%)	27 (82%)	24 (83%)	19 (90%)	15 (83%)	10 (83%)	311 (86%)

Participants were asked to express their views for not distinguishing tablet computers from conventional visual-aid and suggestions were sought how to make them attentive. The participant doctors across specialty informed our research team that e-detailing does not contain information relevant to their day to day practice and often turn out to be monotonous monologue as that of conventional visual-aid detailing. Over 94 per cent participants unequivocally suggested for developing e-detailing as need-based and relevant. In short, e-detailing should be commensurate with their personal style. (*See Table 9*)

Table 9 Need for A Customized e-Detailing

Doctors	GPs 106	Phy 79	O&G 63	Orth 33	Surg 29	Paed 21	Card 18	Endo 12	Total 361
Prefer need-based e-detailing while using tablet computers	103 (97%)	78 (99%)	63 (100%)	22 (67%)	28 (97%)	20 (95%)	15 (83%)	11 (92%)	340 (94%)

Besides information about safety and rational use of medicines, doctors also need comprehensive healthcare solutions for their patients. They want to see the pharmaceutical companies offering themselves as the solution provider. Doctors like to reward the companies those who understand that.

However, our study had one important revelation. The participating doctors were asked to share the number of average SPEs they were meeting per day and how they would appraise the present state of in-clinic communication by the drug marketers. In 86 per cent cases they reportedly expressed that in-clinic communication from pharmaceutical companies were monotonous, repetitive and predictable. 91 per cent doctors reported that the information shared with them by the drug marketers were incomplete; deficient in relevant information like side effects, contraindications, drug interactions of a drug which, the participants felt, was always necessary to remind in every meeting. 89 per cent doctors expressed that more than 90 per cent representations did not add much value to their day to day practice. (*See Table 10*)

Table 10 Doctors' Appraisal of Present State of Communication by Drug Marketers

Doctors	GPs 106	Phy 79	O&G 63	Orth 33	Surg 29	Paed 21	Card 18	Diab 12	Total 361
In-clinic communication is monotonous	88 (83%)	73 (92%)	53 (84%)	28 (85%)	25 (86%)	19 (90%)	16 (89%)	9 (75%)	311 (86%)
Deficient in relevant information	101 (95%)	71 (90%)	60 (95%)	31 (94%)	22 (76%)	20 (95%)	14 (78%)	11 (92%)	330 (91%)
Does not add much value in day to day practice	96 (91%)	77 (97%)	55 (87%)	30 (91%)	27 (93%)	13 (62%)	16 (89%)	7 (58%)	321 (89%)

Another finding of our study was the average time spent by a doctor with an SPE. 97 per cent doctors told that they spent about two minutes per call unless they found it worthy and meaningful. It was necessary to measure time because an effective business communication had to be completed within that stipulated time. A qualitative measurement of such precious "two minutes" divulged that over 30 percent doctors ceased to retain their concentration beyond 45 seconds and within 90 seconds almost 80 per cent doctors withdraw themselves in paying attention towards medical detailing. (*See* Figure *3*) This was because the doctors found those communications boring and out of context.

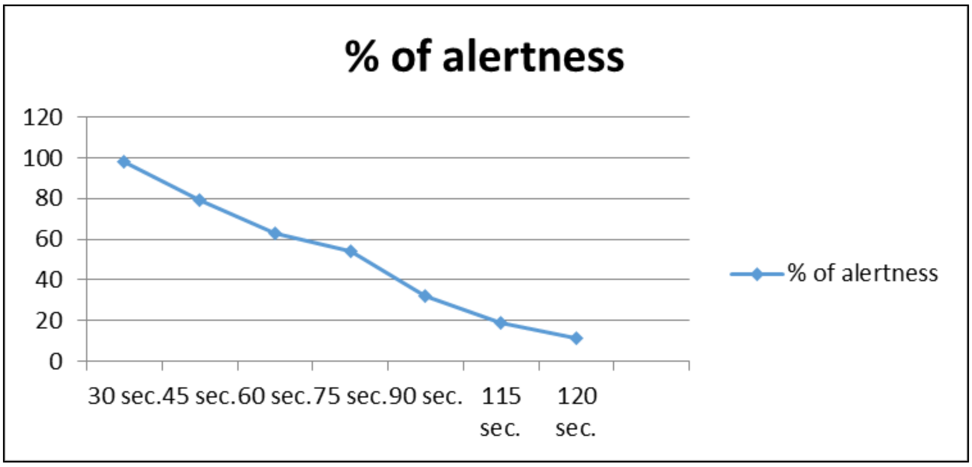

Fig 3 Diminishing Alertness Levels of Doctors during Medical Detailing

6. Results

Our survey findings suggest an important role of e-commerce in shaping pharmaceutical business in India. About 92 per cent doctors meet pharmaceutical sales representatives (SPEs). Considering the present availability of nearly 900,000 doctors, remaining 8 per cent consist of 72,000 doctors which are statistically significant. E-commerce can bring these doctors within the framework of ethical drug promotion. Nearly 73 per cent doctors prefer meeting SPEs once in a month; numbering around 657,000. In a fiercely competitive market, "brand reminder" for these doctors can be initiated through e-commerce application.

E-commerce should help in developing social media end e-mail content suitable for more than 700,000 doctors within a short period. Similarly, e-commerce should be useful preparing content of e-detailing for 820,000 doctors (92 per cent who prefer meeting SPEs) in accordance with their personal style. E-commerce should effectively deal with the difficult concept of customer profiling to maintain high academic standard. The time constrain in a doctor's chamber has to be considered while initiating such futuristic steps.

The most important of all, e-commerce should develop a communication module for India's nearly one million medical practitioners and for more than 100,000 pharmaceutical products. The module should be short, sharp and should contain all relevant information which are useful for a doctor; and can be used via mobile phones, tablet computers and other electronic gadgets following personal style and need of a doctor.

7. Observations

Ethical drug promotion is a complex and difficult subject to deal with because medicine is a rapidly changing domain with perpetual development of new drugs and therapeutic approaches. It requires specialized activities like time bound plan for new product introduction, focus on customer orientation, training and development initiative, creative marketing plans etc. All these require considerable inter-departmental harmony which can be further integrated through e-commerce. The addition of e-commerce in drug promotion means the introduction of an integrated IT system. It's a combined job of the skillful hardware and software personals and the sales and marketing experts.

The strategic importance of e-commerce in pharmaceutical industry is noteworthy since it can create a highway of communication between the company and its customers. The expert team of pharmaceutical marketing in India that knows the intricacies of ethical drug promotion need to collaborate with the IT professionals who can develop software to suit the pressing marketing needs. E-commerce platform should be well-developed and integrated via exchange between these professional groups.

The usage of e-commerce in ethical drug promotion should generate more employment opportunities because more number of professionals would be required to run the show.

With increasing competition, the traditional sales models are gradually getting away and paving the path for modern methodology like e-commerce and adding values to ethical drug promotion activities. However, our survey findings suggest that as high as 88 per cent doctors were skeptical about their dada privacy on being attached to the companies' e-commerce platform. (*See Table 11*)

Table 11 Doctors' Concern about Data Privacy

Doctors	GPs 106	Phy 79	O&G 63	Orth 33	Surg 29	Paed 21	Card 18	Diab 12	Total 361
Getting attached with companies e-commerce platform may breach data privacy	86 (81%)	75 (95%)	61 (97%)	27 (82%)	23 (79%)	19 (90%)	15 (83%)	11 (92%)	317 (88%)

Doctors are suspicious due to insufficient government regulations on data privacy. Therefore, companies' e-commerce platforms should run under strict monitoring and effective controlling of data privacy. It will be an ardent task for the industry to keep the medical practitioner's personal database protected.

8. Conclusion

India's domestic pharmaceutical market will continue to grow in coming years. The pharmaceutical companies need to consolidate their business strategies considering the highly competitive business environment and the growth potential. They need to manage long term business relationship by way of appropriately responding to the doctor's preference and style. The technological advancement must be integrated with ethical drug promotion. E-commerce, if applied aptly and with caution, would emerge as highly beneficial for business administration. However, further studies are to be carried out in evaluating the future scope of e-commerce for ethical drug promotion on Indian soil.

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Note:

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